

epiTRENDS

A Monthly Bulletin on Epidemiology and Public Health Practice in Washington State

Summer Food Safety

Summertime warm weather brings many outdoor activities including picnics and barbecues. However, be aware that hot daytime temperatures, different cooking methods, and transporting of food all increase the risk of bacterial foodborne illnesses. In addition, poor hand hygiene during picnics or outdoor meals may also create a risk for illness.

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Symptoms and Course of Illness

Symptoms of these bacterial infections include stomach cramps, nausea, vomiting, diarrhea, and sometimes fever. Most cases last five to seven days and improve without medical treatment, but occasionally the infections are severe or even life threatening, particularly in infants, the elderly, and those with chronic illnesses or immunosuppression. In rare situations, these infections may be fatal.

Bacterial Causes

Bacterial causes of foodborne illness particularly common in the summer include *Salmonella*, *E. coli* O157:H7, *Campylobacter*, and *Vibrio parahaemolyticus*.

- ***Campylobacter*** typically occurs with raw poultry exposure. It is the most common bacterial foodborne illness reported in Washington, with about 1000 cases each year.
- ***Salmonella*** is commonly associated with raw poultry, eggs, and unpasteurized milk or unpasteurized milk products. Usually 700 to 800 cases occur each year in the state. Complications can include bloody diarrhea and infections of the bloodstream.
- ***E. coli O157:H7*** is most typically linked with raw or undercooked ground beef, with 150–250 cases reported annually in Washington. Complications can include bloody diarrhea or damage to the kidneys.
- ***Vibrio parahaemolyticus*** can occur in shellfish in the Pacific Northwest, particularly during summer months. Numbers of cases vary considerably year to year, but typically several dozen are reported.

Determining the cause of severe diarrhea through stool culture is important in investigating potential exposures and preventing additional cases. *Salmonella* and *E. coli* isolates are among the specimens that diagnostic laboratories are required to submit to Washington State Department of Health Public Health Laboratories where verification and additional typing or genetic fingerprinting can be done (see box for reporting requirements).

Food Preparation and Precautions

Special problems in food preparation can cause summertime illness. Preparing meals safely may be a challenge in different settings such as parks, with higher ambient temperatures, or while cooking with unfamiliar equipment such as grills or hibachis. Cross contamination can occur if contaminated raw food, such as eggs, chicken, or chicken juices, comes in contact with foods that will not be cooked.



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Although all of the regular food safety rules apply, extra precautions are necessary during this time of year to prevent foodborne illness. Following these suggestions from the Department of Health will help reduce the risk of foodborne illness while you're cooking or eating outdoors:

- **Keep your menu simple.** Take only the amount of food you will use at the picnic and try to take foods that do not need to be kept cold or hot.
- **Keep it clean.** Always wash your hands with hot, soapy water before and after handling food, after handling raw meat, and before you eat. If soap and water aren't available, use disposable wet wipes and a waterless hand sanitizer.
- **Keep the right temperature.** Keeping food at the correct temperature, either below 40°F or above 140°F, will prevent bacterial growth. Warming trays or bowls of ice can be used to maintain food at safe temperatures. Perishable food should not be a room temperature for more than one hour; refrigerate leftovers immediately or discard.
- **Keep it separate.** Store raw meat in water-tight containers away from other foods. If taking meat to an off-site barbecue, do most of the preparation at home (such as forming hamburger patties, spearing skewers, and cutting meat). Use separate utensils, cutting boards, and bowls for raw meat and wash your hands often. Don't use the same plates or utensils for both raw and cooked meats. Discard uncooked marinade, and remember that barbecue sauce and brushes that are contaminated with raw meat and poultry juices can contaminate cooked foods.
- **Chill salads.** Mayonnaise has received a "bad rap." The actual food safety culprit is the other warm ingredients, not the commercially prepared mayonnaise. For food safety, chill salad ingredients before mixing potato, macaroni, and other salads containing milk, pasta, meat, or eggs. Even canned tuna should be chilled, unless it will be eaten immediately after opening the can. Once you've mixed the salads, keep them cold until they're eaten.
- **Melons need special care.** Cantaloupe and watermelon should be scrubbed with a vegetable brush under running water before they are sliced. Once cut, the melons should be kept cold or eaten immediately.
- **Select shellfish.** Consume shellfish only from commercial sources or harvested from a currently approved beach
(check beaches at 1 800 562-5632 or <http://www.doh.wa.gov/ehp/sf/recshell.htm>).

- **Cook thoroughly.** Barbecued meat often looks done on the outside, even when it's undercooked on the inside. Use a food thermometer to check for doneness (see box, page 3). Follow temperatures recommended by the USDA for home cooking. Consider precooking chicken by parboiling or baking before the barbecue.

Other summer activities that increase exposure to diarrheal infections include contact with farm animals and drinking untreated water during recreation or swimming. Wash hands with soap and water when heavy contamination is possible, such as after visiting a petting zoo. Before drinking from a lake or stream, boil, filter, or treat the water. Persons with diarrhea should not enter swimming areas.

epiTRENDS Monthly Posting Alert

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<http://listserv.wa.gov/>

Cooking Temperatures

Chicken — cook to 180°F (or until it has no pink inside)

Hamburgers — cook to 160°F (or until brown in the middle)

Beef roasts or steaks — cook to 145°F

Fish and shellfish — cook to 145°F (or until fish is opaque and flakes easily; shellfish is white and firm)

New notifiable conditions posters are available online:

Health care providers:

<http://www.doh.wa.gov/notify/other/providerposter2005.pdf>

Health care facilities:

<http://www.doh.wa.gov/notify/other/hospitalposter2005.pdf>

Laboratories:

<http://www.doh.wa.gov/notify/other/laboratoryposter2005.pdf>

Veterinarians:

<http://www.doh.wa.gov/notify/other/veterinaryposter2005.pdf>

The EpiTrends editorial staff extend their sincere thanks to Sandy Marvinney, outgoing Managing Editor, for her ten years of excellent service to this publication. Her talent, expertise, and cheerful disposition will be missed here at EpiTrends. Thank you, Sandy.